

General Overview
(Do you want to be a goat producer?)
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Introduction

For thousands of years, man has raised goats for a multitude of uses. Goats, as a species, are recognized as one of the first farm animals to be domesticated and used for human consumption. Versatile and hardy, goats can thrive in many different environments and provide food, fiber, and hides for their keepers. In parts of the world, goats are still kept by nomads who use the goats to convert sparse vegetation into milk (which can then be made into cheese or yogurt) and meat. Goat skins make a fine leather (think of kid gloves), and the luxury fibers produced by cashmere and angora goats are made into sumptuous clothes. In fact, it is ironic that goats, animals with an “image problem” in the United States, are the source of many prestigious and expensive products, including goat cheese, cashmere, mohair, and kid leather. And goat meat, while enjoyed by millions in poor countries, is more expensive than many other meats in the U.S. Goat meat is the number one consumed meat in the world.

For this course, we will focus on goats that are raised primarily for meat. Goat meat is a traditional food in many cultures, including among Hispanic, Middle Eastern, African, Jewish, and Caribbean peoples. In recent years, the United States has seen an increase in immigration, and many of these new residents have not only a taste for but a preference for goat meat. This is the reason that demand for goat meat continues to grow, and strong prices mean a favorable economic outlook for producing meat goats. According to the USDA, goat meat production increased dramatically between 1970 and 2001. In 1970, 1.29 metric tons of goat meat was imported into the United States as compared to 9,500 metric tons in 2004.

As you start studying this instructional module you will come across some terms that may not have a specific meaning or is used in a manner that is somewhat confusing. As a producer of goat meat developing and applying such terminology will be helpful to you. Below you will find some terms that are used in this instructional module:

1. Buck - A male goat of any age, also called a billy
2. Doe - A female goat of any age, also called a nanny
3. Kid - A goat less than one year old. Males between six months and one year may be called “bucklings”; while females are “doelings”
4. Fiber - Fleece taken from goats
5. Mohair - Fiber produced by the Angora goat
6. Cashmere - Fiber taken from almost any goat with exception of the Angora
7. Grazing - A term that applies to how animals eat grasses and legumes
8. Browsing - A term that applies to how wildlife, sheep and goats eat vegetation from trees and shrubs
9. Multispecies grazing - A process of allowing animals such as goats and cattle to forage in the same rangeland
10. Production cycle - A term that applies to an agriculture commodity that is being available for sale

11. Gestation - A period of time for fetus development from conception to birth
12. Fetus - Unborn young
13. Parasite - An organism that lives on or within another animal (host), benefiting at the host's expense

Optimum pasture use/brush control

Besides producing a highly-sought-after meat, meat goats serve another important function. They can put land to better use by grazing and browsing plants that would otherwise go to waste. In doing so, goats make meat out of previously unused plants and also prevent those plants from taking over the area. For example, if left alone, multiflora rose can soon dominate a field, choking out grasses, legumes, and other forage plants. Goats grazing that area will eventually convert the field back to grasses and clovers, because they will graze the thorny roses and allow the grasses to compete. All over the country, people are using sheep and goats to control invasive, noxious weeds in a cost-effective and environmentally-friendly manner with ample opportunity and need for more. Therefore, producers of meat goats should consider the grazing abilities of their goats as another economic benefit.



Why raise goats? (and not cattle or emus?) What are the advantages?

We've mentioned the two major uses of meat goats: meat and land management. Of course, there are other animals that make meat and can use otherwise wasted plants. So, what is special about goats, in comparison to cattle, for example?

Strong market/ethnic demand=strong prices

As previously stated, there is a strong demand for goat meat. This is in contrast to emus, which did not have a good meat market. Many immigrants would rather eat goat meat than any other kind. This presents an opportunity for American farmers and ranchers, as there is a lot of room for expansion in this industry: we are currently importing goat meat equivalent to over 700,000 thousand goats per year with the majority of the goats coming from Australia.

Goats are an attractive enterprise for many who may be intimidated by larger animals. Goats are small and safer to work around than cattle, and because of their size and ease of handling, there is no need for expensive working facilities or head gates, squeeze chutes, and other equipment essential in cattle ranching.

Low cost (to buy and raise)

Goats are one of the cheapest livestock enterprises to start-up, because they do not require much capital to purchase or feed. Also, as stated above, facilities are cheaper than for cattle.

Different grazing preferences = better use of diverse forages

Because goats prefer to browse (eat brush or vines) rather than graze grasses, they are complimentary grazing in combination with cattle or horses. Using more than one species to graze an area is called “multispecies grazing” and in nature it maintains species balance and ecological stability in an area. Modern farming practices have tended to limit the kinds of animals on a specific piece of land, and this encourages less useful plants to dominate an area. For example, on a pasture used by cattle alone, shrubs and vines may increase, because cattle do not graze those plants consistently. Adding goats to the pasture will result in more meat being produced on that land, because the goats and cattle will be turning different forages into meat.

Different grazing habits = sustainable control of weeds and brush

Another benefit of goats grazing plants that cattle won't is that they prevent weeds and brush from taking over an area. The brush that a goat eats is converted into money by way of meat. Because it won't be necessary to use chemicals or other means to control the brushy plants, the goats will also save you money. Besides the financial benefits, goats are a much safer tool to use on weeds. Many people develop sensitivity to chemicals after years of exposure; using goats to accomplish the goal is much better for the environment and those living in the area.

Prolific breeders = rapid building of herd size and/or salable kids

Some livestock enterprises, such as cattle by their nature, increase slowly. Goats (and sheep) stand in contrast to cattle, because they reproduce very well and quickly. Goats can have their first kid at one year of age; and while that first kid is likely to be a single birth. Twinning is usual thereafter. Therefore, herds grow rapidly in maturity and in numbers.



Shorter production cycles = quick return on investment

Not only do they reproduce well, goats also reach market size very quickly. Gestation is five months (compared to nine months for cattle), and the kids may be sold at weaning, about four months after birth, or held a bit longer on pasture. In any case, the kid crop should be ready to market less than a year after the breeding date. This means that the initial investment can be quickly recouped, and cash flow is more favorable than for cattle enterprises.

Goats combine well with cattle enterprises = increased income AND control of brush

Adding goats to a cattle farm at the rate of one or two does per cow can result in a 25% greater return per acre, due to more pounds of meat produced. In addition, the goats will control brush so that cattle pastures are dominated by grasses and clover, with no need for spraying expensive chemicals to stop invasive weeds and brush.

What problems must be dealt with?

Every enterprise has its challenges, and goats are no exception. The big problems in raising goats are fencing, internal parasites, predation, and lack of knowledge.

Fences

Goats are clever, athletic, and small. These traits make them much harder to keep in a pasture than cattle. Wires must be spaced closer, and gates can have no wide gaps. Farmers adding goats to their farm will need to adapt and improve the fences, in most cases. This costs money and time, and it is probably the major stumbling block for many who would otherwise like to try raising goats.

Fencing for goats is more expensive than for other livestock

More strands of electric wire will be needed to control goats (two to three strands for division fences and at least five strands for perimeter, if that is acceptable according to the state fence laws). If barbed wire or woven wire fencing is already in place, it might be necessary to add a strand or two of electric wire offset from the existing fence. Goats are notorious for escaping through barbed wire, and horned goats often are caught in woven wire.

Internal parasites

The most common health problem for goats is internal parasite infection. Goats are meant to range over a large area and to eat brushy plants that other species don't like. If goats are raised that way, they will not be exposed to many parasite larvae. Therefore, under natural conditions, goats do not need to be resistant to parasites. Perhaps this is why some goats show so little ability to withstand parasite infections when we force goats to stay in the same area for long periods and graze close to the ground, where internal parasite larvae are found.

More susceptible/less resistant than cattle

While goats that are forced to graze a small area for an extended time are more vulnerable to parasites than cattle are, the good news is that the internal parasites are species-specific; goat parasites have a bad effect on goats, but they do not harm cattle, and vice versa. This means that by grazing cattle after goats the cattle will remove (by ingesting) goat parasite larvae from the pasture, thus “cleaning”; it for the next rotation of goats back to that pasture. One caution: sheep and goats are similar enough that they do share parasites, so grazing them together has no beneficial effect on parasite loads.

Predators

Because of their small size and good taste, goats are vulnerable to predators, primarily coyotes and dogs, but also bears, wolves, bobcats, and other predators. In heavily populated areas, dogs will likely be the biggest problem. Producers have several options to protect the livestock, including a good fence, guardian animals



such as donkeys, llamas, or guardian dogs, penning the animals close to home at night, or some combination of these. Detailed information about predation and how to prevent it is included in another module.

Lack of knowledge

In addition to the demands of fencing, managing internal parasites, and protecting from predators, some goat producers are challenged by a lack of knowledge about goats. The interest in meat goats has been relatively recent, and many people are new to the business. The learning curve is steep, and help can be difficult to find: many educators have no prior experience or training in the field; veterinarians may not have much experience with goats; and neighboring farmers may not know anything about goats, even if they are very experienced with other kinds of livestock.

Even so, there are many ways to add to your knowledge. One of those is this course. Completing all the modules will teach you a lot about raising meat goats.

The knowledge you gain by reading should be complemented by talking to and visiting with farmers and educators with goat experience. Ask questions and find out what you need to know. Try to visit other farms so you can see how they handle various aspects of the business. Try to figure out whether what they are doing would work for you. Is it practical? Is it cost effective?

A good place to meet other producers is at field days and seminars. Meeting and talking to other farmers is, in many cases, at least as important as the material on the program, and the program information can add to your knowledge tremendously. Ask your Cooperative Extension agent about any programs planned for your area, and if there are none, you might want to encourage the agent to offer one.

Joining producer groups, such as a state or local meat goat producer group or a breed association, is another way to meet other farmers and learn from them. Some groups offer cooperative marketing services to their members, and many groups host workshops and field days. It is worth your time to be involved in a good association.

Written materials are available to help with any problems you may encounter.

Finally, the best teacher of all is experience—your “on-the-job training.” The first two or three years will be especially good at showing you what you don't know; that happens to everybody, so expect it. It's best to begin your education by buying a small, healthy herd (more about that later), so that you can learn without incurring much financial loss. Goats multiply very quickly, and you will soon have a larger herd, if things go well. Starting small allows you to learn about normal behavior and health, grazing management, kidding, marketing, and all the other aspects of raising meat goats. When you are comfortable with your small herd and know that your fences work for goats, then you can easily expand into a larger business. Your chances of success are much greater if you learn your lessons before acquiring a large herd.

Production systems

There are various options for raising meat goats. How you will manage the goats will impact the profitability of the goat enterprise, the demands placed on your family, and the resources needed. The converse is also true; your goals for the goat enterprise and for your whole farm (which includes your family) and the resources available may determine the method of raising goats.

Extensive-range or pasture/woods, not handled much

Keeping goats on a large tract of pasture or rangeland and leaving them to fend for themselves is one time-honored way to raise goats. Under this system, the producer expects the goats to forage for their food and care for their young with no assistance. Goats are very good foragers, and if given access to enough land, they will be able to survive and raise progeny with very little labor or feed cost. On the other hand, this does require a large tract of land, and some form of predator protection must be in place to prevent excessive losses. Because of predation and lack of intervention at kidding time, fewer kids may survive to weaning. This reduces the income from the enterprise, but lower expenses may offset that. Goats raised with little human contact (as in this extensive system) will likely be wild.



Pastured and rotated-management intensive grazing

For more control of stock and better management of pasture resources, producers may choose to raise goats under management intensive grazing. In this system, pastures are cross-fenced into “paddocks” so that goats can be restricted in an area and moved to fresh pasture every few days (or even more frequently). This rotation allows the producer to allocate feed to the goats depending on their needs, prevent over-grazing of a given area, monitor the intake of the goats, and make frequent observations of the goats' health, growth, and behavior. Goats raised in this way will be tamer, their health problems can be more easily noticed and solved, and feed cost is still minimized, as in the extensive grazing method. Grazing goats in a restricted area helps reduce predator problems, as guardian animals can more effectively patrol a small area, and electric fence can also be used to advantage. However, this method demands more time and attention from the producer, fencing costs are much higher, and the producer must learn how to manage pastures.

Pastured but not rotated

Of course, it is possible to pasture goats without using a management intensive grazing system. Some producers choose to take a short cut by keeping the goats on pasture but not rotating them. This saves initial fence costs, time, and labor, and it is easier. However, goats that graze and re-graze the same small area will eventually develop problems with internal parasites. Furthermore, pastures abused by over-grazing will not be as productive. As pastures and animals both decline in health, feed costs go up. Therefore, while this method may seem cheap and easy, over time it will create its own problems and be less profitable or sustainable.

Dry lot; fed purchased hay and grain

Some producers forego pasture altogether and keep the goats in a dry lot (where there is no growing forage), feeding them all purchased feeds. This system has many drawbacks.

First of all, goats do not convert feed efficiently, and they naturally waste a lot of hay. Feed costs under this system will exceed returns of the kid crop, unless the kids are sold as high-priced breeding stock. But those animals do not know how to graze to maintain themselves economically, and a buyer is likely to be dissatisfied with such expensive-to-feed animals. This system also demands more labor and time to provide feed and manage manure.

Goats that don't get enough exercise are likely to be overfat, which leads to kidding problems. And goats kept confined are going to have more fights (as bored children do) and become aggressive toward less-dominant animals. At feeding time, this may be particularly noticeable, as the dominant goats drive off the timid ones, resulting in over-fed bullies and smaller, under-fed animals.

In short, from the standpoint of goat behavior and of economics, this system is not a viable choice.

Markets and Marketing

Within each of the four production systems introduced above, there may be any of the following six types of meat goat businesses. These businesses are categorized according to the goat markets they address. The production system is how goats are raised, while these business models reflect why goats are raised.

Meat for ethnic holiday markets

When raising meat goats for ethnic markets, producers time breeding so that kids are the desired size at the proper time to meet holiday demands. This requires knowledge and planning on the part of the producer. What size kids are needed for a certain holiday? How fast will the kids grow? When are the holidays? Producers who go to the trouble to find the answers and produce kids to fill holiday demand will get top dollar for their product. Help in answering questions about ethnic markets may be found at www.sheepgoatmarketing.info.

Meat for the open market

Meat goats can be sold at any time, and some producers do not have the interest or time to manage their herd for the holiday markets. They allow breeding to happen when the does are naturally cycling (generally in the fall, as days get shorter). Kidding occurs five months after breeding, and the first kids can be sold at weaning, about 14 to 20 weeks later. The producer sells when it is convenient and takes the market price, ignoring opportunities for higher prices. However, in areas with strong ethnic markets, prices can still be strong, and if costs are kept low, the enterprise should be profitable.

Meat for on-farm sale

Producers in areas with large enough ethnic populations may choose to set their own prices and sell animals from their farm premises. This has several advantages, including reduced risk of low prices (since the farmer sets the price) and lower marketing cost (no hauling charges, sale barn commission or shrink loss). However, it may be inconvenient and disruptive to have buyers come to the farm. It may be difficult to provide a consistent supply of kids for sale. And it can be very time-consuming to sell kids one or two at a time rather than by the truckload.

Some producers who are successful in on-farm sales eventually become brokers, purchasing kids from other farms to re-sell on the premises. This does pose the risk of spreading disease, however. Another consideration is that some buyers will want to slaughter the kids on the spot. Is this allowed in your state? What requirements must be met to properly dispose of offal? Do you need extra farm insurance to cover any possible accidents?

For the right family this is a profitable and interesting way to market meat kids. However, it will not be feasible in all areas or for families who are reluctant to give up their privacy. More information about marketing methods is available from www.sheepgoatmarketing.info. (See the Education section).

Goats for brush control

In this business, meat kids are a by-product of the main enterprise, using goats for land management, such as pasture improvement, noxious weed removal, or to create fire breaks. The goat owner may contract with land owners to provide these services. Goats need to be healthy and good foragers, but the manager needs to pay most attention to the condition of the land (not the goats). Goats may lose body condition if they are forced to overgraze to meet the goals of the landowner, and kids may not grow to their full potential. Many people have been successful in this enterprise, but it is certainly not simple. Goats must be monitored and controlled, water and predator protection must be provided, and the contracts have to benefit both parties.



Breeding stock for commercial herds

Because breeding stock is in demand, some producers find it profitable to focus on producing kids for commercial goat herds (purebred or crossbred, registered or not). To be successful at this, production costs must be kept low, animals must be healthy, and the stock must not only meet the needs of the commercial producer, but also be offered at a fair price. For the long-term success of the business, all the lower-quality kids (male and female) should be sold to the meat market, while better-quality kids stay in the herd or are sold to other producers. This enterprise requires some advertising and marketing.

Breeding stock for show herds

The most rarefied goat business is the production of breeding stock for show herds. In this case, stock will be purebred and registered, and success in the show ring will be essential to its reputation. Stock must be “what the judges are looking for” in addition to being healthy; extensive marketing and advertising are necessary. Kids in this herd should be sorted in four ways; for show and sale, for show and for building the herd, for sale to a commercial herd, and for sale to the meat market. This business offers the chance for high income, because top end kids get top dollar, but this business demands a lot of time, expertise, marketing, and show ring ability. It also has the highest costs of production. It is a risky business because the market is both fickle and political. Therefore, it is not for the beginner or the faint-hearted.

Each of these businesses has its challenges and opportunities. Each also requires that the producer begin by selecting healthy stock that will work in the business. Learning how to choose stock is the subject of our next section.

Breeds and breed characteristics

One of the first decisions about raising goats is which breed or breeds to raise. As a beginning goat producer you need to identify specific breeds by name, appearance, and general characteristics. Note that the characteristics listed are what the breed is known for, but within each breed there is a great deal of individual variation. For instance, some individuals within a fast-growing breed will actually grow more slowly than some individuals of a slow-growing breed. Therefore, it is very important to select stock by their individual merits and not simply by the breed.

There are seven main meat goat breeds you should know: Boer, Spanish, Myotonic, Kiko, Angora, Savanna and Pygmy. Angora and cashmere goats are raised for their luxury fibers, but are also for meat and some are dairy goats such as the Nubian is used for meat. Crosses of any of the above have value in meat production, as well.

Spanish

The Spanish breed has developed through natural selection from goats first placed in Texas in the early 1540's by Spanish explorers. Survival of the fittest insured that the breed became hardy, good foragers, and good mothers. Living in the wild gave an advantage to smaller stock, because they needed less food. These goats have been referred to as “brush” goats in some regions, because of their use in controlling brush. Some producers have improved the stock by selecting for better muscling, more milk, or other criteria. These improved Spanish goats are much larger and meatier than the average Spanish goat.

In terms of productivity, there is a lot of variation in the growth rate of Spanish goats. Selection is key to improving that trait. Producers appreciate the Spanish goats for their toughness and their ability to thrive in a low-input situation. Spanish goats come in many colors and patterns. Many Spanish does are capable of breeding out-of-season.



Boer

The present day Boer breed was developed in the early 1900's when African ranchers began breeding goats specifically for meat production. Today there are approximately five million Boer goats in Africa, of which only 1.6 million are of the improved type. In the late 1980's the breed was first imported into the United States from Australia and New Zealand. In 1993, the breed was first imported into the United States from Australia and New Zealand.



Boer goats are easily recognized by their white bodies, red heads, and large, muscular body. Boer goat does are a moderate maintenance animal with sufficient milk to raise a kid that is early maturing and hangs an excellent carcass. The mature buck weights between 240 and 300 pounds, and a mature doe weights between 200 and 225 pounds. Performance records indicate this breed of goat is capable of average daily gains of over 0.44 pounds per day in feedlot conditions, with an average performance between 0.3 to 0.4 pounds per day. The breed is prolific with common kidding rates of 200 percent. They have not had the selection for hardiness as the Spanish. The Boer goat is capable of out-of-season breeding making possible three kiddings every two years.

Kiko

The Kiko breed was developed by crossing feral does (relatively small goats which developed from escaped domestic goats in New Zealand with does weighing between 25 and 55 pounds and buck less than 88 pounds) with Nubian, Toggenberg, and Saanen bucks. The Kiko herd was closed in 1986 (all breeding animals had to be selected from within the herd). Kiko goats (weighing roughly twice the weight of feral goats) are capable of high levels of meat production and can produce well under a variety of conditions. The breed can forage and survive with no help from humans; these goats are usually white, hardy, and trouble-free. They are thought to be more parasite-resistant than other breeds. In studies at Tennessee State University, Kikos in that herd proved to be superior to the Boers in the herd in pounds of kid weaned per doe and in hardiness. Smaller than the Boers, Kikos are not as recognized by buyers as being as desirable as meat animals. For this reason, many breeders will use a Boer buck on Kiko does.



Myotonic

Myotonic goats are often referred to as Wooden Leg, “stiff-leg” or Tennessee fainting goats. The “stiff-leg” name is derived from the fact that the goats, when excited or frightened, “lock up” and often fall over and lie very stiff (faint) for a few seconds (normally only ten to twenty seconds). The breed carries a recessive gene (myotonia) that makes their muscles lock up when the animal gets excited. However research tends to show when this animal is crossed with another breed the recessive gene is not expressed. The breed is one of the few breeds indigenous to the United States. Two strains of the Myotonic breed exist, one strain in Tennessee and the



Eastern United States and the other strain in Texas. While the exact circumstances of the breed's development are unknown, it is widely accepted that the breed originated in Tennessee. It is believed that fainting goats in the United States can trace their origin back to four goats imported to Tennessee from Nova Scotia by John Tinsley. The Myotonic goat is heavy in the rump and deep in the chest. While multi-colored animals are not uncommon, the most common colors are black and white. The breed is classified as a seasonal breeder. Many breeders have noted that the breed has the capability to produce two kiddings a year and have been discovered as an excellent crossbreeding stock for the Boer goat.

Savanna

The Savanna breed is relatively new to the United States. According to information collected by Redlands Community College El Reno, Oklahoma in 2002 only 100 purebred animals existed within the United States and that number was owned by twelve individuals. The breed originated in South Africa and made its way into the United States from Canada in the late 1990's. The breed is a large framed, extremely well muscled goat with white color containing a few black pigments found on the ears. The body characteristics resemble those of the Boer goat. Bucks are aggressive breeders, does are excellent mothers, taking care of the kids, and producing a high volume of milk. The breed is considered to be a prolific breed with multiple births more common than single births. The breed is an excellent forage animal and can sustain its body condition with a limited amount of supplemental feeding. The largest herd of the Savanna breed exists in Oklahoma with the remaining inventory of the breed being found in Iowa and California.



Pygmy

Pygmy goats are small goats of African origin. They are considered meat goats but are mainly used as pets. Pygmies are bred to be “cobby” and heavy boned. All body colors are acceptable but breed-specific markings are required.



Angora



Angora goats are raised primarily for their luxurious mohair fiber, but they are also good meat animals originated in Turkey. They work well in a cross-breeding program but the value of the mohair clip is ruined. Angoras can be raised in cold or hot climates, but they do not have much parasite resistance and do better in dry or open-range conditions. They are more likely to have singles and more likely to abort under stress, but they can

produce a fine carcass. If there is a good market for mohair and if production costs are kept low, Angoras can be profitable. Be aware that Angoras must be sheared every six months. The breed has a small body, not very prolific and produces a good quality carcass.

Other Breeds

Cashmere goats are also raised for fiber and can likewise serve for meat and of course grazing. Difficulty of processing and selling the fiber has prompted some producers to focus on cashmere goats solely for their meat. “Cashmere” goats are not a distinct breed, thus there is considerable variation in body size, shape, color, and productivity.

Dairy goats are used for meat, but dairy kids tend to have more bone and less meat on their frames. Nubians and LaManchas cross well with meat breeds, and the result can be a very good carcass on the kid, one that grows fast due to the milk production of the mother. Other dairy breeds may also be used in a cross, because the improvement in milk production results in a heavier weaned kid. Dairy does are also readily available and affordable in many areas.

Crossbreeds allow commercial producers to choose desirable traits from two or more breeds and gain increased vigor in the resulting kids (known as “hybrid vigor”). But crossbreeding does not always yield desired outcomes, sometimes blending the less-desirable traits of the parents, rather than expressing the best. If many breeds are used, uniformity may suffer. Usually, however, crossbreeding results in a stronger and healthier herd that is easier to maintain.

Producers should evaluate individual goats on their own merits and not assume that all animals of a particular breed will fit the breed standard. Selection of superior individuals, whatever the breed, is much wiser than choosing a breed and taking whatever is for sale. In selecting breeding stock, there are several important considerations: the market for kids, your personal preferences, availability of stock raised with management similar to yours and in your climate, conformation, and most importantly, health. In the next section, we will explore each of these principles.

How to choose breeds/breeding stock

The first consideration is what is the planned market for the kids? Which type of meat goat business are you in? What are the needs of that market?

For example, if you are selling meat goat kids to a particular ethnic group, you need to think about what size kid is needed, what time of year you need the kid ready to sell, and whether the buyer has a preference for color or type. What price can you reasonably expect to receive for the kids? What will it cost to maintain the does?

Having answered those questions, you may decide that you want to sell 60-pound kids at the auction barn, where you've heard that buyers prefer the Boer coloration and pay extra for that red head. You think you can plan to get \$1.25/pound live weight for the kids, and that would gross about \$70 per kid. In your area, a big Boer doe costs a lot to maintain, possibly as much as \$60 a year, not leaving much profit after the kids are sold. But perhaps you could use a Boer buck on some smaller does-Spanish or Kiko or crossbreeds-reduce maintenance costs for the doe herd, and

still give the buyers red-headed, muscular kids. If your does average 50% twins (weaning a 150% kid crop), there should be some modest profit.

Of course, this is a hypothetical example, but looking at the economics of what you intend to do will help you realize that you cannot afford very high-priced stock for a meat goat enterprise, where meat is the product. Having an idea of the returns will help you be prudent when you purchase stock.

Once you have in mind the breed or breeds that should work for your particular meat goat business, the next consideration are personal preference. You can't quantify the benefits, but there is satisfaction in raising a type of animal that you find appealing. If you enjoy the animals, you will feel a pride in producing them and take pleasure in observing and caring for them. This is intangible, but real nevertheless.

The next consideration is a very practical one: what kind of goats are available near you and kept under the same kind of management that you intend to use? This is important because animals that is already adapted to your climate and to your management system will be more productive and healthy than goats that suffer "transplant shock" Goats that have been raised in a dry lot will not be very good at grazing or browsing. If you intend to run an extensive operation and not interfere with the goats' mothering, you will be better served by goats that thrive by themselves. In addition to proximity and management, you have to be practical about price. Sustainable agriculture means that you make some profit, and paying too much for initial stock can mean that there is no profit for several years. It may be wiser to purchase healthy unregistered does and the best bucks you can afford and set about to continually improve the herd. Within a few years, you should have a good herd of does and money in the bank besides.

This brings up another question: How many goats do you need to buy? In general, you can add one or two does per cow to your cattle farm without any impact on the cattle's pasturage. The kids produced will boost your income, and the does will keep your pastures clear of weeds or brush. Another rule of thumb is that six to eight does are the equivalent of one cow (this depends on the size of the does, as well as the size of the cow). Therefore, if you know that it takes 3 acres to support a cow in your area, and you have 30 acres, you could theoretically have 60 to 80 does on your land. However, if you have never raised goats before, it would be safer to start with a smaller herd and let it multiply over a few years. This will keep your costs low and allow you time to learn about goats while you adapt your systems and avoid being overwhelmed or overstocking your land. If you are buying only a small number of goats, you can be more selective about the quality and traits of the animals, and also avoid going into debt.

Consider health and conformation (soundness)

Once you have found goats for sale of the type and price you are looking for, it's time to select the individual animals to take home to your farm. Now you have to consider conformation and health. Health is the critical component, but conformation is also an important factor.

To begin, look at the entire herd. Do they walk well? Do they appear lively and vigorous? Are they in proper flesh, not too fat or too thin? Are their coats shiny and their bodies smooth, not lumpy with abscesses? Are they grazing or kept in a pen with free-choice hay?



Your overall first impressions are valuable. If the herd appears to be healthy, your chances of getting healthy animals are much better.

Having gained a sense of the overall quality of the herd, now examine the individuals that are for sale. You are looking at their conformation and the physical appearances of health. For raising meat kids, you don't need show-quality does. You should select does that are sound and ready to be productive. Good conformation (soundness) means:

- Sound feet and legs
- Good body capacity (deep and wide, to handle forages and hold twin kids)
- Correctly aligned bite, with lower incisors meeting the upper dental pad, not over-shot or under-shot
- Good teat structure, with the correct number of functional teats (two)
- Good teeth

Goats that are sound in these areas should be able to range widely for forages, to bite and chew and digest those forages well, and to carry and feed kids. In addition to passing these tests, though, the goats you select must be healthy. Some visual indicators of good health are:

- No limping
- Alertness, lively appearance
- No lumps or abscesses, especially on the neck or shoulder area
- Moderate condition, not too fat or too thin
- Smooth, shiny coat
- Pink mucous membranes, including inside lower eyelid
- Normal feces; round pellets, no diarrhea

Diseases to be aware of

Of course, there are diseases (such as Caprine Arthritis-Encephalitis-CAE) that may not be apparent. But if the seller's herd matches the above description, your odds of purchasing a healthy animal from it are very good. The reverse is also true; if the seller's herd includes animals that are limping, emaciated, "dull", have abscesses, or appear "poor" chances are that the animal you buy will be carrying a disease, even if that disease is not obvious in that particular animal.

Because transmissible diseases (including internal parasites) may not be apparent in an individual, observing the condition of the herd of origin is important. This is one reason why it is better to purchase animals on the farm, rather than at an auction. Also, sale barns receive a lot of unhealthy and otherwise unsuitable animals. They are the dumping grounds for goats that do not thrive, have contagious diseases, are terrible mothers or incorrigible jumpers, non-breeders or poor milkers. If you shop for breeding stock at the sale barn, you may very well be bringing home diseases to infect the rest of your herd, or be bringing home animals that are unproductive

and therefore unprofitable. If you are lucky enough to find some good stock at the sale barn, by the time those good animals have mingled with the unhealthy ones in the barn, suffered the stress of shipping and sale, and tracked through an environment where many unhealthy animals have been, their immune systems may be overwhelmed. There really are no bargains at sale barns, even if they are cheap.

Take someone who knows about goats with you when you go shopping. This will help you be objective when looking for potential problems.

It is also helpful to educate yourself about diseases and their treatments (or lack of treatments) before you go. Understanding the consequences of a particular disease in your herd will help you understand the risks and the costs of buying a disease. This may mean that you offer to pay for some testing to screen for a disease that you are particularly anxious to avoid.

Another module will contain in-depth information about goat diseases. However, because learning to recognize health and disease is an important part of selecting stock, the following chart of symptoms and the diseases they can indicate will be useful.

<i>Symptoms/observed characteristics (What you see:)</i>	<i>Possible diseases indicated (What you may get:)</i>
Limping	foot rot, CAE, mastitis, injury
Dull, depressed appearance	pneumonia, internal parasites, bacterial infection
Lumps, abscesses	caseous lymphadenitis, injection-site abscesses, other causes
Very thin	internal parasites, CAE, Johne's, bad teeth (or may just have finished raising triplets, or had a hard winter with insufficient feed)
Very fat	may have breeding problems; failure to kid (or, grossly overfed)
“scruffy” appearance	parasites (internal or external), malnourished or other causes
diarrhea, pale membranes, bottle jaw, “poor”	internal parasites or coccidiosis
runny eyes, blindness	pinkeye
misshapen udder	mastitis (present or previous)

(Note: This is a very sketchy list. Thedford's Goat Health Handbook includes a diagnostic chart that is much more detailed. This is only a starting point as you learn about diseases.)

Summary: deciding to raise goats

You have nearly completed the first module of the goat certification course. Now it is time to tie together all the concepts covered and review the principles. One way to assess your mastery of this module is to complete the assignment that is a part of the instructional module.

The meat goat business is growing, fueled by strong ethnic demand for the meat. Understanding the possibilities, advantages, and challenges of raising goats will help ensure you plan your enterprise to be profitable. Selection of healthy, sound breeding stock will add to the enjoyment and profitability of the enterprise. Visiting farmers, consulting veterinarians and educators, reading print and Web resources, and completing this course will enhance your chances for success.